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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,447	07/18/2006	Atsushi Nakadaira	293352US40PCT	4713

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EXAMINER

HICKS, CHARLES V

ART UNIT	PAPER NUMBER
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2629

NOTIFICATION DATE	DELIVERY MODE
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08/27/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/586,447	Applicant(s) NAKADAIRA ET AL.	
	Examiner CHARLES HICKS	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) 3-8, 10-12, 14-20 and 22-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 9, 13 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>07/18/2006; 02/20/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 3-8, 10-12, 14-20, 22-50 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 08/03/2009. Claims 1, 2, 9, 13, and 21 are currently pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 recites the limitation “the display apparatus”. There is insufficient antecedent basis for this limitation in the claim. Examiner suggests the limitation to read “a display apparatus”.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 21 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. A program is neither a computer component nor a statutory process, as it is not an “act” or “acts” being performed nor does it define any structural and functional interrelationships between the computer program and

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other elements of a computer, which permit the computer program's functionality to be realized.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1, 2, 9, 13, 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al. (US 2004/0021663) in view of Geshwind (US 6,590,573).

In reference to claim 1, Suzuki teaches a three-dimensional pointing method for pointing at a desired point in a three-dimensional space represented on a display apparatus based on two-dimensional coordinates of a position that is pointed at by an input on a predetermined detection plane (Suzuki, pg. 1, par. 5, input devices; pg. 1, par. 10),

and based on pressure that is pressure applied to the input, comprising the step of: changing a depth direction coordinate of a three-dimensional pointer to be displayed in the three-dimensional space according to the pressure of the input (Suzuki, Fig. 5),

and displaying the three-dimensional pointer (Suzuki, Fig. 5).

Suzuki however fails to teach the input device is a pen tip of an input pen.

Geshwind discloses an interactive computer system for creating three-dimensional image information and for converting two-dimensional image information for three-dimensional display systems, analogous in art with that of Suzuki, wherein the input device is a pen tip of an input pen (Geshwind, col. 7, ll. 50-67).

At the time the invention was made it would have been obvious to one having ordinary skill in the art to modify the three-dimensional informational processing device of Suzuki such that the input device is a pen tip of an input pen, as taught by Geshwind.

As one of ordinary skill would appreciate, the suggestion/motivation for doing so would have been the well known use of a graphic arts input pen with a variable pressure tip in order to specify depth (Geshwind, col. 7, ll. 50-67).

In reference to claim 2, Suzuki teaches a three-dimensional pointing method for pointing at a desired point in a three-dimensional space represented on the display apparatus based on two-dimensional coordinates of a position that is pointed at by of an input on a predetermined detection plane (Suzuki, pg. 1, par. 5, input devices; pg. 1, par. 10), and

pressure that is pressure applied to the input (Suzuki, Fig. 5).

Suzuki however fails to teach the input device is a pen tip of an input pen, an inclination angle that is an angle between an axis of the input pen and the detection plane, and an direction angle that is an angle between a projection of the axis of the input pen onto the detection plane and a predetermined line on the detection plane, comprising the steps of: obtaining an extension of the axis of the input pen in the three-dimensional space based on the inclination angle and the direction angle of the input pen; displaying a three-dimensional pointer on the extension in the three-dimensional space; and changing a coordinate of a three-dimensional pointer in the direction of the extension in the three-dimensional space according to the pen pressure of the input pen, and displaying the three-dimensional pointer.

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Geshwind discloses an interactive computer system for creating three-dimensional image information and for converting two-dimensional image information for three-dimensional display systems, analogous in art with that of Suzuki, wherein the input devise is a pen tip of an input pen (Geshwind, col. 7, ll. 50-67),

an inclination angle that is an angle between an axis of the input pen and the detection plane (Geshwind, col. 23, ll. 16-30; col. 25, ll. 1-8),

and an direction angle that is an angle between a projection of the axis of the input pen onto the detection plane and a predetermined line on the detection plane (Geshwind, col. 23, ll. 16-30; col. 25, ll. 1-8),

comprising the steps of: obtaining an extension of the axis of the input pen in the three-dimensional space based on the inclination angle and the direction angle of the input pen (Geshwind, col. 23, ll. 16-30; col. 25, ll. 1-8),

displaying a three-dimensional pointer on the extension in the three-dimensional space (Geshwind, col. 23, ll. 16-30; col. 25, ll. 1-8),

and changing a coordinate of a three-dimensional pointer in the direction of the extension in the three-dimensional space according to the pen pressure of the input pen, and displaying the three-dimensional pointer (Geshwind, col. 23, ll. 16-30; col. 25, ll. 1-8).

At the time the invention was made it would have been obvious to one having ordinary skill in the art to modify the three-dimensional informational processing device of Suzuki such that the input devise is a pen tip of an input

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pen, an inclination angle that is an angle between an axis of the input pen and the detection plane, and a direction angle that is an angle between a projection of the axis of the input pen onto the detection plane and a predetermined line on the detection plane, comprising the steps of: obtaining an extension of the axis of the input pen in the three-dimensional space based on the inclination angle and the direction angle of the input pen; displaying a three-dimensional pointer on the extension in the three-dimensional space; and changing a coordinate of a three-dimensional pointer in the direction of the extension in the three-dimensional space according to the pen pressure of the input pen, and displaying the three-dimensional pointer, as taught by Geshwind.

As one of ordinary skill would appreciate, the suggestion/motivation for doing so would have been the well known use of a graphic arts input pen with a variable pressure tip in order to specify depth (Geshwind, col. 7, ll. 50-67), and to enable a graphic artist to use the angle or tilt of the pen for 3-D modeling or sculpting (Geshwind, col. 25. ll. 1-8).

In reference to claim 9, Suzuki teaches a three-dimensional pointing apparatus for generating a pointer based on two-dimensional coordinates of a position that is pointed at by an input on a predetermined detection plane (Suzuki, pg. 1, par. 5, input devices; pg. 1, par. 10),

and based on pressure that is pressure applied to the input (Suzuki, Fig. 5),

and displaying the generated pointer at a desired point in three-dimensional space represented on a display apparatus to perform pointing (Suzuki, Fig. 5),

comprising: input information obtaining means for obtaining information of the two-dimensional coordinates and the pen pressure of the input pen (Suzuki, Fig. 5).

Suzuki however fails to teach the input device is a pen tip of an input pen, pointer position/rotation angle calculation means for calculating a position and an rotation angle of the pointer to be displayed in the three-dimensional space represented on the display apparatus based on the information obtained by input information obtaining means; pointer generation means for generate the pointer based on the calculation result of the pointer position/rotation angle calculation means; pointing determination means for determining whether there is an object that is pointed at by the pointer generated by the pointer generation means in the three-dimensional space represented on the display apparatus; object generation means for generating the object to be displayed in the three-dimensional space represented on the display apparatus; and display control means for displaying the pointer generated by the pointer generation means and the object generated by the object generation means in the three-dimensional space represented on the display apparatus, wherein the pointer position/rotation angle calculation means changes a depth direction coordinate of the three-dimensional pointer to

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be displayed in the three-dimensional space according to the pen pressure of the input pen in the calculation.

Geshwind discloses an interactive computer system for creating three-dimensional image information and for converting two-dimensional image information for three-dimensional display systems, analogous in art with that of Suzuki, wherein the input device is a pen tip of an input pen (Geshwind, col. 7, ll. 50-67),

pointer position/rotation angle calculation means for calculating a position and an rotation angle of the pointer to be displayed in the three-dimensional space represented on the display apparatus based on the information obtained by input information obtaining means (Geshwind, col. 23, ll. 16-30; col. 25, ll. 1-8),

pointer generation means for generate the pointer based on the calculation result of the pointer position/rotation angle calculation means (Geshwind, col. 23, ll. 16-30; col. 25, ll. 1-8),

pointing determination means for determining whether there is an object that is pointed at by the pointer generated by the pointer generation means in the three-dimensional space represented on the display apparatus (Geshwind, col. 4, ll. 23-35);

object generation means for generating the object to be displayed in the three-dimensional space represented on the display apparatus (Geshwind, col. 4, ll. 23-35);

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and display control means for displaying the pointer generated by the pointer generation means and the object generated by the object generation means in the three-dimensional space represented on the display apparatus (Geshwind, col. 4, ll. 23-35);

wherein the pointer position/rotation angle calculation means changes a depth direction coordinate of the three-dimensional pointer to be displayed in the three-dimensional space according to the pen pressure of the input pen in the calculation (Geshwind, col. 23, ll. 16-30; col. 25, ll. 1-8).

At the time the invention was made it would have been obvious to one having ordinary skill in the art to modify the three-dimensional informational processing device of Suzuki such that the input device is a pen tip of an input pen, pointer position/rotation angle calculation means for calculating a position and an rotation angle of the pointer to be displayed in the three-dimensional space represented on the display apparatus based on the information obtained by input information obtaining means; pointer generation means for generate the pointer based on the calculation result of the pointer position/rotation angle calculation means; pointing determination means for determining whether there is an object that is pointed at by the pointer generated by the pointer generation means in the three-dimensional space represented on the display apparatus; object generation means for generating the object to be displayed in the three-dimensional space represented on the display apparatus; and display control means for displaying the pointer generated by the pointer generation means and

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the object generated by the object generation means in the three-dimensional space represented on the display apparatus, wherein the pointer position/rotation angle calculation means changes a depth direction coordinate of the three-dimensional pointer to be displayed in the three-dimensional space according to the pen pressure of the input pen in the calculation, as taught by Geshwind.

As one of ordinary skill would appreciate, the suggestion/motivation for doing so would have been the well known use of a graphic arts input pen with a variable pressure tip in order to specify depth (Geshwind, col. 7, ll. 50-67), and to enable a graphic artist to use the angle or tilt of the pen for 3-D modeling or sculpting (Geshwind, col. 25, ll. 1-8).

Claim 13 is rejected as being dependent on rejected claim 9 as discussed above and further, Suzuki modified by Geshwind teaches wherein, in addition to the information of the two-dimensional coordinates and the pen pressure, the input information obtaining means obtains an inclination angle that is an angle between an axis of the pen and the detection plane (Geshwind, col. 23, ll. 16-30; col. 25, ll. 1-8),

and an direction angle that is an angle between a projection of the axis of the input pen onto the detection plane and a predetermined line on the detection plane (Geshwind, col. 23, ll. 16-30; col. 25, ll. 1-8),

and the pointer position/rotation angle calculation means obtains an extension of the axis of the input pen in the three-dimensional space based on

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the inclination angle and the direction angle of the input pen, sets a position of a three-dimensional pointer to be on the extension in the three-dimensional space, and performs the calculation by changing a coordinate of the three-dimensional pointer in the direction of the extension in the three-dimensional space according to the pen pressure of the input pen (Geshwind, col. 23, ll. 16-30; col. 25, ll. 1-8).

Claim 21 is rejected as being dependent on rejected claim 9 as discussed above and further, Suzuki modified by Geshwind teaches a three-dimensional pointing program for causing a computer to execute processes in each means of the three-dimensional pointing apparatus (Suzuki, pg. 1, par. 3).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES HICKS whose telephone number is 571-270-7535. The examiner can normally be reached on Monday-Thursday from 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz, can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sumati Lefkowitz/
Supervisory Patent Examiner, Art Unit 2629